

REMARKS

Summary of the Amendment

Upon entry of the amendment, Claims 1 and 5 will have been amended. Therefore, Claims 1-13 currently remain pending.

Summary of the Office Action

In the Office Action, Claims 1-9 were rejected under 35 U.S.C. § 102(b) over the art of record. Claims 10 and 13 were rejected under 35 U.S.C. § 103(a) over the art of record. Claims 11 and 12 were merely objected to as being dependent upon a rejected base claim. By the present amendment and remarks, Applicant submits that the rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

Acknowledgement of Allowable Subject Matter

Applicant gratefully acknowledges the Examiner's indication that Claims 11 and 12 would be allowable if rewritten to include all limitations of the base claim and any intervening claims.

Traversal of Rejection Under 35 U.S.C. § 102(b)

Applicant traverses the rejection of Claims 1-9 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,356,370 to Fleming (hereinafter "FLEMING").

A. Review of FLEMING

FLEMING is directed toward an orthopedic brace utilizing two bearing plates that mate with two spherical bearing surfaces and pivot with respect to each other utilizing two cams. The specification of FLEMING teaches that the brace has an upper arm 18 with a first bearing plate 40 and a lower arm 24 with a second bearing plate 42. The first and second bearing plates 40, 42 match with the respective ones of first and second part spherical bearing

surfaces 50, 52. The first and second part spherical bearings 50, 52 are disposed upon a link 48.

The specification further teaches that the first and second bearing plates 40, 42 include respective ones of the first and second cavities 44, 46. Fitting within each of the first and second cavities 44, 46, is a respective one of first and second cams 54, 56. The first and second cams 54, 56 are substantially arrow shaped and may be formed integrally with the first and second part spherical bearing surfaces 50, 52.

The first and second cams 54, 56 also have curved indents 58 for accommodating rollers 60. The first and second cams 54, 56 and rollers 60 each fit within the respective ones of the first and second cavities 44, 46, with two rollers for each cam rotating about the external peripheral surfaces of each respective cam and cavity. The rotational movement of the first and second bearing plates 40, 42 depends upon the dimensions of the curved indents 58 in the first and second cams 54, 56 and the dimensions of the curved indents 62 in the first and second cavities 44, 46.

The rollers 60 provide rotational movement between the surfaces rather than sliding movement. FLEMING further discloses that “[v]ariations in the shapes of these curved indents can result in different geometries of rotation and also a difference in the range of multiple axis pivotal movement for each of the two bearings.” See FLEMING, column 3, lines 62-65. Finally, a cover 64 fits over the top of the first and second bearing plates 40, 42. The cover 64 is anchored through the first and second cams 54, 56 to the first and second spherical bearing surfaces 50, 52.

B. In re independent Claim 1 (and dependent Claims 2-4)

Applicant’s independent Claim 1 recites, *inter alia*, two upper spherically-pivotal socket mounts disposed in the upper frame member; two lower spherically pivotal socket mounts disposed in the lower frame member; a forward arm member having an upper end being pivotally retained in a forward one of the upper spherically-pivotal socket mounts and a lower end being pivotally retained in a forward one of the lower spherically-pivotal socket mounts; and a rearward arm member having an upper end being pivotally retained in a rearward one of the upper spherically-pivotal socket mounts and a lower end being pivotally

retained in a rearward one of the lower spherically-pivotal socket mounts. Applicant respectfully submits that FLEMING fails to disclose at least the above-noted features of the invention. Therefore, Claim 1 is patentable.

In particular, Applicant notes that FLEMING provides the first and second cams 54, 56 which are disposed within the respective ones of the first and second cavities 44, 46 of the first and second bearing plates 40, 42. As mentioned above, the first and second cams 54, 56 may be integrally formed with the first and second part spherical bearing surfaces 50, 52. The rollers 60 rotate between the curved indents 58 of the first and second cams 54, 56 and the curved indents 62 of the first and second cavities 44, 46. Finally, FLEMING also provides that the first and second bearing plates 40, 42 match with the respective ones of the first and second part spherical bearing surfaces 50, 52.

There appear to be two possible scenarios in which the Examiner might logically apply the FLEMING teachings to the present invention as is now currently recited in independent Claim 1. In particular, it can be foreseen that (1) the Examiner may consider the first or second cams 54, 56 of FLEMING to be the “*forward arm member*” or “*rearward arm member*” recited in Claim 1, and (2) the Examiner may consider the first and second bearing plates 40, 42 matched with the first and second part spherical bearing surfaces 50, 52 to be the upper and lower “*spherically-pivotal socket mounts*” recited in Claim 1.

FLEMING does not teach a “*forward arm member*,” as recited in Claim 1. The first cam 54 may be interpreted by the Examiner to be the “*forward arm member*” because each item is attachable to a pivotable feature. As detailed in the Applicant’s Claim 1, the forward arm member has “an upper end being pivotally retained in a forward one of the upper spherically-pivotal socket mounts [*which is disposed in the upper frame member*] and a lower end being pivotally retained in a forward one of the lower spherically-pivotal socket mounts [*which is disposed in the lower frame member*].” However, the first cam 54 is not pivotally connected or connectable at its ends simultaneously to both the upper arm 18 and the lower arm 24. As shown in Figure 2 of FLEMING, the first cam 54 fits within the first cavity 44 which is in turn disposed within the first bearing plate 40 of the upper arm 18. Indeed, neither end of the first cam member 54 even physically reaches the lower arm 24. See *supra*. Thus, FLEMING fails to teach a “*forward arm member*.”

FLEMING also does not teach a “*rearward arm member*,” as recited in Claim 1, for the above-mentioned reasons. In particular, neither the first or second cams 54, 56 teach either the “*forward arm member*” or the “*rearward arm member*.” Thus, FLEMING fails to teach the “*forward arm member*” and the “*rearward arm member*.”

Additionally, FLEMING does not teach two upper and two lower individual “*spherically-pivotal socket mounts*.” As detailed in Applicant’s Claim 1, there are two upper spherically-pivotal socket mounts that each retains the respective ones of the upper end of the forward arm member and the upper end of the rearward arm member. The two lower spherically-pivotal socket mounts are likewise configured to retain the respective ones of the lower end of the forward arm member and the lower end of the rearward arm member. As stated above, FLEMING teaches that the first and second bearing plates 40, 42 match with the respective ones of the first and second part spherical bearing surfaces 50, 52. Although this mating arrangement is utilized to facilitate movement, FLEMING does not teach that the mating arrangement can be accomplished utilizing two upper and two lower individual “*spherically-pivotal socket mounts*.” Therefore, FLEMING fails to teach two upper and two lower individual “*spherically-pivotal socket mounts*.”

Because FLEMING fails to disclose at least the above noted features of the present invention, Applicant submits that FLEMING fails to disclose each and every recited feature of the instant invention, and that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Therefore, Applicant submits that the Examiner’s rejection of independent Claim 1 is improper and should be withdrawn.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claim 1 under 35 U.S.C. § 102(b) and indicate that this claim is allowable over the art of record.

Further, Applicant submits that Claims 2-4 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the present invention.

In particular, Applicant submits that FLEMING fails to teach, *inter alia*, the exteriorly positionable anatomical brace wherein the two upper spherically-pivotal socket

mounts have pivot ratios differing from each other, as is recited in Claim 2; wherein the two lower spherically-pivotal socket mounts have pivot ratios differing from each other, as is recited in Claim 3; and wherein each of the spherically-pivotal socket mounts has a pivot ratio different from all other socket mounts, as is recited in Claim 4.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claims 1-4 under 35 U.S.C. § 102(b) and indicate that these claims are allowable over the art of record.

C. In re independent Claim 5 (and dependent Claims 6-9)

Applicant's independent Claim 5 recites, as recited in independent Claim 1, *inter alia*, two upper spherically-pivotal socket mounts disposed in the upper frame member; two lower spherically pivotal socket mounts disposed in the lower frame member; a forward arm member having an upper end being pivotally retained in a forward one of the upper spherically-pivotal socket mounts and a lower end being pivotally retained in a forward one of the lower spherically-pivotal socket mounts; and a rearward arm member having an upper end being pivotally retained in a rearward one of the upper spherically-pivotal socket mounts and a lower end being pivotally retained in a rearward one of the lower spherically-pivotal socket mounts. In addition, Claim 5 also recites, *inter alia*, a substantially infinitely adjustable limb extension regulator for demarcating limb extension range. Applicant respectfully submits that FLEMING fails to disclose at least the above-noted features of the invention. Therefore, Claim 5 is patentable.

Applicant respectfully submits that FLEMING fails to teach the “forward arm member,” the “rearward arm member,” and upper and lower “spherically-pivotal socket mounts” for the reasons discussed *supra*. Claim 5 incorporates the claim language of independent Claim 1, and, as discussed *supra*, Claim 1 is patentable because FLEMING fails to disclose each and every feature of the invention therein. Thus, Claim 5 is patentable as well. In addition, Claim 5 also recites an additional feature that further defines an embodiment of the present invention: a substantially infinitely adjustable limb extension regulator for demarcating limb extension range. For these reasons, and those detailed above, Applicant submits that FLEMING fails to disclose each and every recited feature of the

instant invention, and that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Therefore, Applicant submits that the Examiner's rejection of independent Claim 5 is improper and should be withdrawn.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claim 5 under 35 U.S.C. § 102(b) and indicate that this claim is allowable over the art of record.

Further, Applicant submits that Claims 6-9 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the present invention.

In particular, Applicant submits that FLEMING fails to teach, *inter alia*, the exteriorly positionable anatomical brace wherein as claimed in Claim 5 wherein the two upper spherically-pivotal socket mounts have pivot ratios differing from each other, as is recited in Claim 6; wherein the two lower spherically-pivotal socket mounts have pivot ratios differing from each other, as is recited in Claim 7; wherein each of the spherically-pivotal socket mounts has a pivot ratio different from all other socket mounts, as is recited in Claim 8; wherein the limb extension regulator is an expanse of a length of cable extending between the rearward arm member and the upper frame member, as is recited in Claim 9.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of Claims 5-9 under 35 U.S.C. § 102(b) and indicate that these claims are allowable over the art of record.

Traversal of Rejection Under 35 U.S.C. § 103(a)

Applicant traverses the rejection of Claims 10 and 13 under 35 U.S.C. § 103(a) as being unpatentable over FLEMING.

A. In re dependant Claim 10

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over FLEMING. The Office Action indicated that the specific material used is considered a matter of obvious design choice as the skilled artisan would select a material based on its suitability for intended use.

Claim 10 depends from independent Claim 9 (which depends from independent base Claim 5) and recites additional features that further define the present invention embodied in Claim 5. For the same reasons discussed *supra*, FLEMING fails to teach or suggest at least the above-noted features of the instant invention, as recited in Claim 5. Applicant therefore submits that the teachings of FLEMING would not have suggested the invention as embodied in Claim 10 to one of ordinary skill in the art. Therefore, Applicant respectfully requests that the rejection of Claim 10 under 35 U.S.C. § 103(a) be withdrawn.

In particular, FLEMING does not teach or suggest to one of ordinary skill in the art, *inter alia*, the exteriorly positionable anatomical brace wherein the limb extension regulator is an expanse of a length of cable extending between the rearward arm member and the upper frame member, and wherein the length of cable is fabricated of braided metal strands, as is recited in Claim 10.

Moreover, Applicant submits that Claim 10 is allowable at least for the reason that it depends from an allowable base claim and because it recites additional features that further define the present invention.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of Claim 10 under 35 U.S.C. § 103(a) and indicate that Claim 10 is allowable over the art of record.

B. In re dependant Claim 13

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over FLEMING. The Office Action stated that the use of scales or markers to determine position is notoriously old and well known in the art.

Claims 13 depends from independent Claim 11 (which depends from Claim 9, which depends from independent base Claim 5) and recites additional features that further define the present invention embodied in Claim 5. For the same reasons discussed *supra*, FLEMING fails to teach or suggest at least the above-noted features of the instant invention, as recited in Claim 5. Applicant therefore submits that the teachings of FLEMING would not have suggested the invention as embodied in Claim 13 to one of ordinary skill in the art.

Therefore, Applicant respectfully requests that the rejection of Claim 13 under 35 U.S.C. § 103(a) be withdrawn.

Further, FLEMING does not teach or suggest to one of ordinary skill in the art the exteriorly positionable anatomical brace wherein the limb extension regulator is an expanse of a length of cable extending between the rearward arm member and the upper frame member, additionally comprising an exteriorly accessible controller for lengthening or shortening the length of cable extending between the rearward arm member and the upper frame member, thereby regulating limb extension distance, additionally comprising an externally visible measurement scale for the length of cable such that respective lengths of cable extending between the rearward arm member and the upper frame member of each opposing pivoting assembly of the pivoting joint member can be made equal.

Moreover, Applicant submits that Claim 13 is allowable at least for the reason that it depends from an allowable base claim and because it recites additional features that further define the present invention.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of Claim 13 under 35 U.S.C. § 103(a) and indicate that Claim 13 is allowable over the art of record.

Traversal of Objection to Claims 11 and 12

Applicant traverses the objection to Claims 11 and 12. The Examiner indicated that Claims 11 and 12 would be allowable if rewritten to include all limitations of the base claim and any intervening claims. Claim 11 depends from dependent Claim 9, which depends from independent Claim 5. Claim 12 depends from dependent Claim 11.

Applicant reiterates and resubmits its comments regarding independent Claim 5, which are detailed *supra*. In this regard, Applicant submits that Claims 11 and 12 should be allowed because they depend from an allowable base claim. Therefore, Applicant respectfully requests that the Examiner indicate that Claims 11 and 12 are allowable.

CONCLUSION

Applicant respectfully submits that each and every pending claim of the present invention meets the requirements for patentability and respectfully requests the Examiner to indicate allowance of each and every pending claim of the present invention.

In view of the foregoing, it is submitted that none of the references of record, when considered individually or in any proper combination thereof, anticipate or render obvious the Applicant's invention as recited in each of Claims 1-13. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

If any additional fee is required, please charge Deposit Account Number 19-4330.

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